DOCUMENT RESUME

ED 298 257 CE 050 734

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TITLE The Work Aspect Preference Scale: Can It Be Used with Year 9 Students? A Report of the Mount Druitt Longitudinal Study.
INSTITUTION Macquarie Univ., North Ryde (Australia). School of Education.
SPONS AGENCY New South Wales Dept. of Education, Sydney (Australia).
PUB DATE May 88
NOTE 36p.; For related documents, see CE 050 732-733.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Academic Achievement; *Attitude Measures; Career Counseling; Career Education; Foreign Countries; High Schools; Longitudinal Studies; *Test Reliability; *Test Validity; Values; *Work Attitudes
IDENTIFIERS *Australia; *Mount Druitt Longitudinal Study; Work Aspect Preference Scale

ABSTRACT

During the 1986 administration of the Work Aspect Preference Scale (WAPS) in a study of career development from Year 8 to Year 9, some of the students in Mount Druitt, west of Sydney, Australia, had difficulty in understanding the meaning of some terms. A closer investigation was then conducted of the usefulness of the WAPS for this group of students. The subjects were 98 Year 9 students, a subsample of approximately 650 students who had participated in the Mount Druitt Longitudinal Study. These 98 students had taken the Progressive Achievement Test Reading Comprehension Form A. Fifty who scored at or above the mean were labeled high achievers, and 48 who scored below were labeled low achievers. A set of questions was designed to elicit information about a student's understanding of individual WAPS items and included as the final section of an interview related to career development and beliefs about work and unemployment. Results indicated that the ability of students to interpret each item as intended was reasonably good, although lower achieving students had more difficulties than high achievers and their responses should be treated more cautiously. A far greater problem was the tendency to misunderstand how to use the scale as intended and, in particular, to answer in a global, absolute way rather than to respond to each item on the basis of personal preference. Implications were these: (1) that the reliability of the WAPS will be affected by the ability of students to understand correctly the meaning of the items and by any errors in usage of the scale; and (2) that the validity of the WAPS is also thrown into question by any degree of misinterpretation and consequent randomness. (YLB)

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MT. DRUITT LONGITUDINAL STUDY

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The Work Aspect Preference Scale: Can It Be Used With Year 9 Students?

Jenny Barltrop

May, 1988

SP 029 834

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Acknowledgements

The Principals of the Schools involved are gratefully acknowledged for their co-operation, as are the teachers and students who took part in the study.

Special thanks also go to Anne Clark for her support and advice and to Joel Russell for his assistance with the interviews.

The research, of which that reported here forms part, has been supported by the N.S.W. Department of Education.

BACKGROUND TO THE MOUNT DRUITT LONGITUDINAL STUDY

Macquarie University School of Education has been involved in the Mt. Druitt area west of Sydney since 1975. At that time, Mt. Druitt was identified by all the social and welfare agencies as one of the most socially disadvantaged areas in N.S.W. In the same year, funds were made available from the Bernard van Leer Foundation to commence systematic educational intervention at the preschool level in five of the neighbourhoods of Mt. Druitt. The intervention programs were designed to achieve, amongst other aims, a bridging of the educational achievement gap supposed to occur between children from disadvantaged backgrounds and those not considered disadvantaged. As the children moved from the preschools into Kindergarten, the intervention programs were extended into this first year of formal schooling, with a later extension in 1979 into the first grade.

Since that time, the Study has been involved in ongoing assessment of educational achievement, attitudes and classroom behaviour of these children through tests, questionnaires and observation. Teacher and parent interviews have also been conducted. In 1985, the N.S.W. Department of Education took over the financial responsibility for the continuation of the project.

As one of the major objectives of the original intervention programs was to reduce or eliminate the hypothesised achievement gap, it was necessary to introduce groups of children into the study who, in comparison to the Mt. Druitt children, were relatively free of disadvantage, so that the Mt. Druitt children's progress could be compared to that of others.

In 1987, a total of 645 students were involved in the study as follows:

Mt. Druitt School 1	-	211 students
Mt. Druitt School 2	-	187 students
Mt. Druitt School 3	-	169 students
Contrast School 1 - Middle S.E.S. Near Sydney	-	46 students
Contrast School 2 - Middle S.E.S. Distant from Sydney	-	32 students

INTRODUCTION

Work is considered by most people to be one of the most important activities in life and central to our psychological well-being. Therefore, the study of what it is that people value in work and why these things are so important to people is of great significance.

Many researchers agree that there is a need to examine more closely the nature of work values in the Australian context (Dowling and O'Brien, 1981; Feather, 1979; Lokan, Shears and Taylor, 1986), but, according to Pryor (1981), research in this area has been hampered by two factors:

1. Confusion with conceptualizations and definitions of values, and confusion with such terms as beliefs, needs, attitudes, etc.
2. The lack of effective, reliable instruments to measure work values.

In an effort to redress these problems, Pryor has worked extensively on developing a new conceptualization of work values, and a corresponding instrument with which to measure them.

Pryor introduces a new term, "Work Aspect Preference", which is defined as:

> "a statement of the relation between a person (the subject of the relation) and a particular quality of work (the object of the relation). The nature of the relation between these two is that of greater or lesser liking when the person has the opportunity to make a choice". (Pryor, 1979, p.254).

The Work Aspect Preference Scale (WAPS) was constructed by Pryor as a psychological measure to assess the importance to individuals of such qualities of work. It is primarily intended for use in a vocational counselling context, in facilitating exploration of preferences in relation to work, and in evaluating the appropriateness of career decisions (Pryor, 1983, p.1). A copy of the WAPS is included in the appendix.

Any questions regarding the validity or reliability of a psychological measure are always particularized: they can only be answered with reference to a specific group of subjects. The WAPS has undergone extensive evaluation on these criteria for senior high school (Years 11 and 12) students, since this was the population it was principally designed for.

A short definition of each type of reliability and validity, as well as a brief description of the performance of the WAPS when evaluated against these criteria, are provided in the following discussion.

RELIABILITY

> "Reliability describes the extent to which measurements can be depended on to provide consistent, unambiguous information. Measurements are reliable if they reflect 'true' rather than chance aspects of the trait or ability measured. To the extent that chance or random conditions have been reduced, reliability will be high, and measurements will provide dependable knowledge". (Sax, 1980, p.255).

Two types of reliability are relevant in an evaluation of the WAPS: internal consistency and stability.

1. Internal consistency is the degree to which related items on a test are answered in a consistent way by the respondent. It is measured by examining the correlations among related items on the test.

Pryor (1981) shows that the overall internal consistency of the WAPS subscales is satisfactory to good for senior high school students. However, for Year 10 students, a number of the subscales yield correlations which are lower than the acceptable standards for measures in the affective domain, and Pryor warns that caution should be exercised when interpreting WAPS scores for this age group.

2. Stability, or test-retest reliability, is the consistency with which individuals respond to items on the test when it is administered on two

separate occasions. It is measured by correlating test scores obtained by the same individual at two different times.

Test-retest results for the WAPS indicate that the short-term stability of WAPS scores over two to three weeks is satisfactory to very good. However, for an intervening test-retest period of six weeks, there is a substantial drop in overall stability of the WAPS subscales (see Pryor, 1981).

VALIDITY

> "Validity is defined as the extent to which measurements are useful in making decisions relevant to a given purpose. To the extent that measurements fail to improve effective decision making by providing misleading or irrelevant information, they are invalid. No matter how reliable they are, measurements are useless if they are not valid for some desired purpose". (Sax, 1980, p.289).

Given that the WAPS was primarily developed for counselling purposes, then if it is valid one should be able to make accurate inferences, based on its scores, about which aspects of work are important to the client and which are not.

The three types of validity which appear to be most relevant to an evaluation of the WAPS are concurrent validity, content validity and construct validity.

1. Concurrent validity is the extent to which a test can accurately discriminate between individuals grouped according to some related criterion. So, if a major function of the WAPS is to assist people in the process of career exploration, then it should be able to discriminate meaningfully between individuals grouped by occupational choice.

Evidence given by Pryor (1983) suggests that the WAPS subscales are able to significantly discriminate both between senior high school students

on the basis of their stated occupational choice, and between occupations that people are working in or are preparing for.

2. Content validity is the representativeness of a test of the content universe of the construct being measured. The inclusion of items unrelated to the construct, or the failure to include items necessary to totally represent the construct, contribute to content invalidity.

Content validation primarily involves a process of logical analysis. In order to maximize the content validity of the WAPS, Pryor conducted a review of major existing taxonomies of work values and sought ideas and opinions from many students and vocational counsellors. Categories of values, and items representing the content of these values, were established using factor analysis, cluster analysis and item analysis procedures (see Pryor, 1983).

3. Construct validity is the extent to which measurements justify or support the existence of psychological traits, abilities or attributes (i.e. constructs). Validation involves both providing evidence from different sources to support the construct, by showing that it correlates with other tests that independently measure the same construct, and providing evidence that it is distinct from other constructs, by showing that it does not correlate highly with tests that purport to measure different constructs.

Since the WAPS was constructed on the conceptual basis that interests and work aspect preferences are different, evidence for its construct validity lies in demonstrating that it correlates with measures of work values, but not highly with other measures, such as interest inventories. Pryor demonstrates that the WAPS correlates strongly with Super's Work Values Inventory (Super, 1970), but not with various interest inventories, ability tests or personality scales, thus supporting his conceptualization

of the work aspect preference as a valid psychological construct (Pryor, 1983).

Virtually all the above evaluations of reliability and validity of the WAPS have used samples of senior high school students, except for a sample of adults used in assessing the concurrent validity, and a sample of Year 10 students used in assessing the internal consistency. For the latter group, the reliability of the WAPS was found to be lower than the normally acceptable levels for measures in the affective domain.

Therefore, at this point of time, the only substantial evidence for the validity and reliability of the WAPS relates to senior high school students. No inferences can be made about its validity or reliability for groups other than these.

The WAPS, however, has also been used with Year 10 students, university students and adults. Pryor further claims that the WAPS "should be able to be understood by most people who are literate and in high school or above" (Pryor, 1983, p.27), based on an examination of the reading level of the WAPS, which was estimated to be in the 10 to 12 years age range (Pryor, 1982). Consequently, the Australian Council for Educational Research Catalogue of Tests, Materials and Books (1986) advertises the WAPS as appropriate for use with people from Year 8 at school to adult.

In 1986, the Mt. Druitt Longitudinal Study team decided to make use of the WAPS in a study of career development of students in Mt. Druitt from Year 8 to Year 9. During administration of the instrument, it was found that some of the students had difficulty in understanding the meaning of some of the items. Consequently, the team decided to embark on a closer investigation of the usefulness of the WAPS for this group of students. This report is a presentation of the findings of this investigation.

METHOD

Subjects

The subjects were ninety-eight Year 9 high school students who were a sub-sample of approximately 650 Year 9 students who had participated in the Mt. Druitt Longitudinal Study (MDLS) in previous years. A slightly larger group of 123 students had been selected to take part in interviews relating to career development and beliefs about work and unemployment* from which this sample was derived. In order to investigate and document the representativeness of the sample to the general population of Year 9 high school students in Australia in terms of reading comprehension ability, only those students who had previously sat for the Progressive Achievement Test (P.A.T.) Reading Comprehension Form A in 1986 as part of the MDLS were selected. Students were then classified as high or low achievers, depending on whether their raw score on the P.A.T. fell above or below the mean for normative data on that form of the test. In the sample, 47 students scored above the mean and were thus labelled 'high achievers', while 48 students scored below the mean and were labelled 'low achievers'. Three students scored exactly the mean and were grouped with the 'high achievers' for the purpose of the analysis. A single sample t test of significance was carried out on the students' scores on the P.A.T. to see if students in the sample performed either better or worse on the test than the population. The sample was not found to perform significantly differently ($t = 0.844$, $p = 0.401$), providing some evidence of its representativeness of the general population in terms of reading comprehension as measured by the P.A.T.

* See Barltrop (1988) for a more complete description of the sampling procedure for this group.

Instrument

A set of questions, designed to elicit information about a student's understanding of individual WAPS items, was developed and included as the final section of the interviews mentioned above. The fifty two WAPS items were distributed randomly across the 98 interview schedules such that each student should be questioned about five different items, and each item should appear approximately ten times during the course of the 98 interviews. The following is an outline of the procedure for discussing each of the items:

1. Interviewer: Now let's look at the Work Aspect Preference Scale. Do you remember doing this last year? (If yes, continue. If no, give a brief description of the WAPS and how to complete it).

   (Response)

2. Interviewer: I would like to select just a few of the items and ask you what you think they mean.

3. Interviewer: First lets look at item number ... it says "Work in which you ...". What do you think that means? Can you put it into different words?

   (Response)

4. Interviewer: Now I'd like to know how you would answer that if you were doing the scale. Please tell me on the scale of 1 to 5 shown how important it is to you to have work in which you ...?

   (Response)

5. Interviewer: Now can you tell me why you think that aspect of work is extremely important/...../totally unimportant to you?

(Response)

Procedure

Interviews were conducted early in Term 3 (July to August), 1987, over a period of five weeks. Two interviewers, one male and one female, were involved, and subjects were allocated to an interviewer on the basis that each interviewer should work with approximately the same number of males and females, and of high and low achievers. Students' responses were recorded in writing by the interviewer at the time of the interview.

Appropriate categories for coding the responses were established by discussion between the two interviewers and another researcher experienced with the use of the WAPS. To overcome any problems of inter-rater reliability, only one person coded the responses of the entire sample. However, a second researcher independently coded every second script in order to check the validity of the coding by the first researcher.

ANALYSIS

Dimension 1 : Correctness of meaning

The first dimension by which students' responses were coded related to part 3 of the interview, where students were asked to give their own interpretation of what the WAPS item meant. This dimension will be called "Correctness of meaning", where a "correct" answer is one in which the student interpreted the item to mean the same as that intended by the author of the WAPS. The author's intended meaning of the item was established by reference to the subscale to which the item belonged (See Appendix 2). Therefore, a response was coded as "correct" if the

definition given by the student was consistent with the definition of the subscale to which the item belonged as described in the WAPS manual (Pryor, 1983, p.1).

Several responses were rather vague or lacked some vital element of the definition, but clearly could not be considered wrong. Because it was difficult to differentiate in these cases whether the student's interpretation fell short of the meaning intended by the author, or whether the student merely found it difficult to express verbally his/her interpretation of the item, such responses were coded as "partially correct".

Three other categories were created. "Incorrect" was used if the response bore little resemblance to the definition of the subscale to which the item belonged. If a student couldn't give a definition, or had no idea of what the item meant, this was coded as "Don't Know". "Uncodable" was used if the coder could not understand what the student was trying to say.

The following are examples of "correct", "partially correct" and "incorrect" responses to Item 9.

Item 9 : Work in which you help build a better society.

Subscale: Altruism - a concern for assisting others.

Response (correct): Working with and helping other people.

Response (partially correct): Help improve town or suburb - all jobs do that.

Response (incorrect): You put your money in the bank.

Dimension 2 : Usage of Scale

During parts 4 and 5 of the interviews, it became apparent that students were susceptible to difficulties in using the scale, other than simply reading and understanding the words of an item. Four types of "errors" in using the WAPS were identified, and so a second dimension

called "usage of scale" was set up by which to categorize responses. The four types of "errors" were as follows:

Error Type 1 : Absolute or imperative judgment

Instead of rating an item according to how important it was to them personally, students would rate it according to how important it should be to everyone, or what should be or already is the case.

Examples:

Item 1: Work in which you can work as fast or slowly as you like.

Response: Of little importance. It's not a good idea, because then you'd have people that never get anything done.

Item 35: Work in which you help others live a fuller life.

Response: Of little importance. It's better if people help themselves. They should go and get work instead of you working for them.

Error Type 2 : Confusion of negative

Items which were stated in a negative format were confused so that the student gave the opposite rating to the one which would have been appropriate to his/her actual preference.

Examples:

Item 10: Work in which you are not required to do work in your spare time.

Response: Quite important. I would like to work in my spare time.

Item 19: Work in which you do not have to change the way you live.

Response: Totally unimportant. I wouldn't like to have to change my routine. If I had to I would, but I'd prefer not to.

Error Type 3 : Negative Response

The scale itself is a one-sided scale, allowing for responses ranging from neutral (totally unimportant) through to positive (extremely important). It does not allow a negative response, (i.e. important that the opposite should be the case). If it was important to a student that a job did not have that quality for him/her to be happy with it, the student was forced to choose the nearest response, totally unimportant. Yet this response does not give an accurate representation of the student's actual preference.*

Examples:

Item 37: Work in which you have authority over others.

Response: Totally unimportant. I don't want to be in charge of other people.

Item 51: Work in which you are physically active.

Response: Totally unimportant. I don't like being physically active. I'd rather sit down.

Error Type 4 : Different issue addressed

The student's preference for an item was influenced by some factor other than, or as well as, that which is assumed to be measured as defined by the subscale to which the item belongs.

* It is suspected that many students actually converted the scale, in their own mind, from a one-sided scale to a two-sided scale, with 3 as the mid point or neutral position. The large proportion of responses falling in the 4 to 5 end of the scale would appear to support this hypothesis. However, as students' scores were not actually coded in this study, no definite evidence can be provided at this point.

Examples:

Item 25: Work in which you do not have to spend all of your time behind a desk (Physical Activity).

Response: Quite important. I would get bored sitting around all day. (Issue being addressed is variety/boredom rather than physical activity.)

Item 49: Work in which you set out the best way for others to do a job (Management).

Response: Quite important. I like working with people and helping them to improve their abilities. (Issue being addressed is altruism rather than management.)

Coding options on the second dimension, "Usage of Scale", then, included the above four types of errors, as well as a category for correct usage of the scale "correct", and one for "uncodable" responses. Combinations of the error types were also allowed for those responses which manifested more than one type of error.

RESULTS AND DISCUSSION

Table 1 shows the percentage of responses coded as correct on each of the dimensions, as well as the percentage of responses correct on both dimensions.

Table 1

Dimension \ Achievement Level	High	Low	All Students
Correctness of meaning	87.2	69.2	78.4
Usage of scale	69.2	52.9	61.2
Correct on both dimensions	67.6	49.2	58.6

High achievers, overall, gave responses coded as "correct" on both dimensions more often than low achievers. The total number of responses correct on both dimensions was 58.6%.

This however, does not mean that 58.6% of students consistently interpreted the item as intended and made a correct usage of the scale, all the time. Most students made errors on one or both of the dimensions on at least some of the items they were questioned about. Table 2 demonstrates this.

Table 2: Percentage of students giving various numbers of responses correct on both dimensions.

No. of completely correct responses out of a possible 5 \ Achievement Level	High	Low	All Students
0	4	12	8
1	0	19	9
2	18	12	15
3	30	31	31
4	28	21	25
5	20	4	12
Total	100	100	100

Twelve percent of students gave responses correct on both dimensions for every item that they were questioned about. High achieving students were more likely to give completely correct responses on all items than were low achieving students. The most common number of completely correct responses given by students was three out of a possible five.

Correctness of Meaning - overall results

Table 3 shows the percentage of responses falling into each category on Dimension 1.

Table 3 : Percentage of responses in each category on Dimension 1

Category \ Achievement Level	High	Low	All Students
Correct	87.2	69.2	78.4
Partially correct	7.6	12.9	10.2
Incorrect	3.6	13.8	8.6
Don't know	0.8	4.1	2.4
Uncodable	0.8	0	0.4

Students generally performed reasonably well on this dimension, giving the "correct" interpretation of the items 78.4% of the time. Low-achieving students had greater difficulty, however, with about 10% more "incorrect" responses and a higher proportion of "partially correct" and "don't know" responses than high achievers.

Usage of Scale - Overall Results

The following table gives a breakdown of the percentage of responses in each category on the dimension "usage of scale". It should be noted that any one response may have manifested more than one type of error, so that the totals of each column are not necessarily 100%.

Table 4 : Percentage of responses in each category on Dimension 2.

Category \ Achievement Level	High	Low	All Students
Correct	69.2	52.9	61.2
Error Type 1 Absolute/imperative judgment	16.0	24.2	19.6
Error Type 2 Confusion of negative	0	1.7	0.8
Error Type 3 Negative response	3.6	2.5	3.1
Error Type 4 Different issue addressed	8.8	11.7	10.2
Uncodable	4.8	12.9	8.8

The most common type of error was that of an absolute or imperative judgment rather than the statement of a personal preference.

The tendency of some students to respond to an item on the basis of an issue different to that intended by the item, was another frequent problem.

However, the number of times students made Type 2 and Type 3 errors was relatively small.

Analysis of individual items

Table 5 shows the percentage of responses coded as correct on each of the dimensions as well as the percentage of responses correct on both dimensions, for each of the 52 individual WAPS items.

Table 5 : Percentage of responses correct on Dimension 1, Dimension 2 and both dimensions for each of the 52 WAPS items.

Item Number / Dimension	1. Correctness of meaning	2. Usage of Scale	Correct on both Dimensions	Item Number / Dimension	1. Correctness of meaning	2. Usage of Scale	Correct on both Dimensions
1	88	50	50	27	80	50	50
2	100	100	100	28	100	82	82
3	92	58	58	29	82	64	64
4	100	100	100	30	100	75	75
5	64	36	36	31	50	50	50
6	80	70	70	32	70	70	70
7	89	100	89	33	88	75	75
8	80	70	70	34	67	67	67
9	56	0	0	35	80	40	40
10	90	80	70	36	78	56	56
11	56	33	33	37	100	33	33
12	100	82	82	38	100	91	91
13	63	38	38	39	33	56	33
14	100	100	100	40	78	44	44
15	78	44	44	41	100	89	89
16	82	64	64	42	57	43	43
17	50	30	30	43	68	50	38
18	78	44	33	44	100	89	89
19	89	67	67	45	100	78	78
20	92	92	92	46	70	40	30
21	100	29	29	47	91	57	57
22	75	63	63	48	57	82	57
23	20	10	10	49	25	25	25
24	60	50	50	50	90	70	70
25	36	45	27	51	89	33	22
26	100	88	88	52	100	100	100

a) Correctness of meaning

Six items had 50% or less of students giving the correct response on the meaning dimension. These were items 17, 23, 25, 31, 39 and 49. Of

these items, two relate to the Creativity subscale, two to the Management subscale and two to the Physical Activity Subscale.

The two items relating to the Management Subscale (items 23 and 49) were the items most often given a different interpretation than that intended. Students rarely spoke about the idea of them personally being an organizer or manager of somebody else's work. Frequently, students thought the item explained the way the work environment was organized. Who was responsible for doing the organizing or the managing was unclear, but students commonly saw themselves as recipients of such organisational structures. Several students interpreted item 49 to mean that they helped other people in their work.

Examples:

Item 23: "Work in which you set goals for workers to reach".

Responses: "You've got something that you're working towards".

"You organize things for yourself, make sure you've got something to strive for".

Item 49: "Work in which you set out the best way for others to do a job".

Responses: "You help other people do their job".

"The job is set out for you - how to do it".

Items 25 and 39 relating to the Physical Activity Subscale, were frequently answered partially correctly. Although the responses could not often be coded as outrightly incorrect, students rarely mentioned the concept of absence of physical activity. However, their responses to Parts 4 and 5 of the interview indicated that the most common interpretation was absence of interesting activity, rather than strictly physical activity.

Examples:

Item 25: "Work in which you do not have to spend all of your time behind a desk."

Response: "Do different things at job, not just same old thing behind a desk."

Some students interpreted item 39 to mean a total lack of <u>any</u> activity.

Example:

Item 39: "Work in which you are not just sitting down all day."

Responses: "Just sitting down, not doing any work."

"Not doing anything."

Items 17 and 31 relate to the Creativity Subscale. Item 31 was often misinterpreted to mean different ways of doing the job for various reasons such as to promote efficiency or allow variety and flexibility.

Examples:

Item 31: "Work in which you experiment with different ways of doing things".

Responses: "You find the way that you like best to do your job - find the most efficient way".

"You try different ways of doing the job - a variety of ways so you don't get bored.

Item 17 was frequently answered partially correctly by students, but there was little emphasis on the concept of creativity or originality.

Example:

Item 17: "Work in which you originate new ideas and/or products".

Responses: "Help decide on new things for the company - you're part of the decision, not just the bosses".

"You learn more about and make new products".

b) Errors in usage of scale

Twenty two of the 52 items had 50% or more of responses with an error in usage (see Table 5).

Table 6 gives a breakdown of the percentage of responses with errors type 1 and 4 for each of the 52 WAPS items.

Table 6 : Percentage of responses with Error type 1 and Error type 4 for each of the 52 WAPS items.

Item Number \ Error Type	1. Absolute/ imperative judgment	4. Different issue addressed	Item Number \ Error Type	1. Absolute/ imperative judgment	4. Different issue addressed
1	50	-	27	20	20
2	-	-	28	18	9
3	25	8	29	18	18
4	-	-	30	13	-
5	18	36	31	17	33
6	30	-	32	-	-
7	-	-	33	13	-
8	20	-	34	11	33
9	57	-	35	40	-
10	10	10	36	22	-
11	33	33	37	44	-
12	18	-	38	9	-
13	38	25	39	-	-
14	-	-	40	22	-
15	44	-	41	-	11
16	9	18	42	43	29
17	30	20	43	13	13
18	44	-	44	11	-
19	11	-	45	22	-
20	8	-	46	20	20
21	43	-	47	27	-
22	38	13	48	9	-
23	50	30	49	38	38
24	20	20	50	10	-
25	9	36	51	-	44
26	-	-	52	-	-

i) Error Type 1 : Absolute/imperative judgment.

The item by far the most prone to this type of error was item 9, with more than half of responses falling prey.

Examples:

Item 9: "Work in which you help build a better society".

Responses: "Quite important because it helps everyone to get along with one another".

"It's quite important to help people to be better".

"Extremely important. All jobs should help to improve the town or suburb".

Items 1 and 23 also performed poorly in this category.

Examples:

Item 1: "Work in which you can work as fast or slowly as you like".

Response: "It's not a good idea because then you'd have people that never get anything done".

Item 23: "Work in which you set goals for workers to reach".

Response: "Totally unimportant. If you set standards for them, they might work too quick and mess it up".

It could be argued that imperative or absolute judgments are causally related to preferences in that a person may choose certain actions, or find a certain behaviour to be personally preferable <u>because</u> he/she believes it to be true or good. For example, a person may choose to give aid to someone in need because he/she believes that it is a good or right thing to do.

However this type of causal relationship cannot always be assumed to hold for everyone, since people frequently believe something to be true or good, but choose not to act accordingly. For example, a second person may believe that it is good to give aid to those in need, but chooses not to help in an accident because he/she would prefer not to get involved, or doesn't have the required skills to be able to help, etc.

Therefore, if a student responds to a WAPS item on the basis of an imperative or absolute judgment, it may be the case that this response reflects his/her personal preference, but this cannot be assumed to be true for all students.

It is quite possible that the layout of the WAPS may contribute to students making this kind of error. The words "Work in which you ..." appear only once at the top of each page, and it is quite easy for a student to neglect to preface each item with this phrase. If this occurs, the personal element of the item can be easily lost. In the interviews, it appeared that many students were answering as if they were reading or thinking in their mind "Work in which there is ..." and responding to the question, "how important is it that work should be like that?" In some cases, the item may take on a totally different meaning. For example, if item 23 is read without the words "Work in which you ...", the word 'set' can be interpreted as an adjective rather than a verb, as in "There are set goals for workers to reach".

ii) Error type 4 : Different issue addressed.

Item 51 had 44% of responses with this type of error. It belongs to the Physical Activity subscale and the most common issue of concern to students was boredom.

Example:

Item 51: "Work in which you are physically active".

Response: "Moderately important. I'd get bored sitting down all day".

Other items which had a large number of errors of this type were 25 (Physical Activity) and 49 (Management). Again, for item 25 the issue of concern was boredom, while for item 49, students were concerned about helping people, rather than managing them.

It may be argued that students are concerned about these other issues because they are actually related to the issues intended by the author to be represented by the item. This may be true, but caution should be exercised when interpreting students' scores on these items, that these related issues be recognized as existing, and be taken into consideration. For any given student, certain items may not actually be measuring what they are intended to measure. For example, it may not be always correct that a student who scores highly on the creativity subscale is concerned primarily with developing something original in his/her work, but rather is more concerned with having the opportunity for variety which may be provided through experimentation or creativity.

Overall, only 26 of the items had more than 50% of responses which could be considered completely correct, that is, had a correct meaning accompanied by no errors in usage. In other words, on half of the items, some form of error was occurring more than half of the time. Further, on most of the items, some form of error occurred at least some of the time. Only two items (4 and 52) were completely error free, that is, all respondents not only interpreted them correctly, but consistently used the scale correctly in relation to them.

Analysis of subscales

Table 7 shows the percentage of responses correct on each dimension, and both dimensions for each of the 13 subscales, while Table 8 gives a breakdown of the most common Dimension 2 errors on each of the subscales.

Table 7 : Percentage of responses correct on each dimension and both dimensions, for each of the 13 subscales.

Subscale \ Dimension	1. Correctness of meaning	2. Usage of Scale	Both Dimensions
Independence	87	60	60
Co-Workers	96	88	88
Self-development	77	49	49
Creativity	58	42	39
Money	95	77	74
Life-style	92	80	77
Prestige	78	68	66
Altruism	82	32	32
Security	70	71	64
Management	50	25	25
Detachment	80	64	62
Physical Activity	55	43	30
Surroundings	100	90	90

Table 8 : Percentage of responses with Error type 1 and Error type 4 for each of the 13 subscales.

Subscale \ Error Type	1. Absolute/ imperative judgment	4. Different issue addressed
Independence	25	7
Co-Workers	7	7
Self-development	33	14
Creativity	20	26
Money	17	-
Life-style	12	-
Prestige	15	5
Altruism	42	-
Security	20	12
Management	41	25
Detachment	16	8
Physical Activity	12	26
Surroundings	7	-

The poorest subscales for correctness of meaning were Management (50% of responses correct) Physical Activity (55% of responses correct) and Creativity (58% of responses correct).

Five of the subscales had more than 50% of responses containing errors in usage. Management was the most poorly used subscale (25% correct) with significant numbers of both types of errors.

Overall, the Surroundings and Co-Workers subscales were the most correctly interpreted and used subscales by students, while the Management, Physical Activity, Altruism, Creativity and Self-Development subscales had the most problems.

CONCLUSIONS

The results of this study indicate that there are some problems which need to be considered when using the WAPS with Year 9 students.

The ability of these students to interpret each item as intended is reasonably good, although lower achieving students have more difficulties than high achievers and their responses should be treated more cautiously.

A far greater problem is the tendency for students to misunderstand how to use the scale as it is intended, and in particular to answer in a global, absolute way rather than to respond to each item on the basis of personal preference. In any administration of the WAPS for this age group then, the difference between these two modes of responding should be clearly pointed out, so that students are more likely to complete the scale in the way that it is intended.

Caution should also be exercised when interpreting a student's score on any one of the subscales, that the student has actually responded to the issue intended by the items, and not another, perhaps related, but nevertheless different issue.

These results also have implications for an examination of the reliability and validity of the WAPS for this age group, in that they point to some of the factors which may contribute to a certain degree of unreliability and/or invalidity.

The reliability of the WAPS will be affected both by the ability of students to correctly understand the meaning of the items, and by any errors in usage of the scale. Misinterpretation of items, answering in an absolute or imperative way, and responding to a different issue from that intended, if they remain undetected by the scorer, will all contribute to an apparent randomness in the score, and a corresponding reduction in reliability.

Similarly, the validity of the WAPS is also thrown into question by any degree of misinterpretation and consequent randomness. Specifically, making an imperative or absolute judgment will have an impact on construct validity, since the scale is no longer measuring preferences for aspects of work, but beliefs about the way things are or should be. Misinterpreting an item or responding to a different issue from that intended by the item will affect the construct validity of the individual subscales, because the subscale will no longer be measuring what it was originally designed to measure, but whatever the student interprets it to mean. The content validity will also be affected since the test will include issues it did not intend to, and fail to include some of those it did.

The results of this study, then, point to the need for further investigation of the validity and reliability of the WAPS for students younger than in Year 10.

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APPENDIX 1

QUESTION BOOKLET

WORK ASPECT PREFERENCE SCALE

ROBERT PRYOR

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Australian Council for Educational Research
Copyright © ACER, 1983
ISBN 0 85563 463 4 (Scale)
ISBN 0 85563 467 7 (Specimen Set)

Put all your answers on the ANSWER SHEET.
Do NOT write on this booklet.

BPA – ABCD 8765-4

Introduction

Different people are attracted to different aspects of work. This scale lists some of the aspects of work that people consider important. **You have to consider which of these aspects of work you prefer.** When doing this scale, it does not matter whether you are working or not; you just have to indicate your personal preference.

Each of the aspects of work presented can be rated in the following way:

1 means **Totally unimportant** - this work aspect doesn't matter to me at all and/or I wouldn't care if a job had this quality or not.

2 means **Of little importance** - this work aspect is not very important to me and/or I would like a job only a little more if it had this quality.

3 means **Moderately important** - this work aspect is reasonably important to me and/or I would prefer a job with this quality.

4 means **Quite important** - this work aspect is very desirable to me and/or I would look for a job with this quality.

5 means **Extremely important** - this work aspect is essential to me and/or a job *must* have this quality for me to be happy with it.

Rate each work aspect by marking the box to underline the number, which stands for your attitude to that aspect, on the separate Answer Sheet.

Example

Work in which you . . .

. . . gain rapid promotions . . .

There are no right or wrong answers to any of the items, so just indicate what you think of each aspect.

Judge each work aspect by itself. Do not compare one answer with others you have already made.

Work as quickly and carefully as you can. Do not spend too much time thinking about any one item. A little thought each time should be sufficient.

Do not leave out any items.

If you make a mistake or if you change your mind about an answer, rub it out thoroughly and mark the new number space on the Answer Sheet. Your answers must be put *down* the columns on your Answer Sheet.

Work Aspect Preference Scale

Work in which you

1 ... can work as fast or slowly as you like

2 ... have pleasant people to work with

3 ... improve the skills you have

4 ... are paid a high salary

5 ... design new things

6 ... know that other people think your work is important

7 ... are free to live wherever you like

8 ... are certain of keeping your job

9 ... help build a better society

10 ... are not required to do work in your spare time

11 ... plan and arrange the work of others

12 ... do your job in a safe workplace

13 ... work hard physically

14 ... get to know your fellow workers quite well

15 ... add to the abilities you already have

16 ... can do your own work in your own way

17 ... originate new ideas and/or products

18 ... receive more than your normal pay for good work

19 ... do not have to change the way you live

20 ... get a good reputation for your good work

21 ... give aid to those in need

22 ... can be sure you will always have a job

23 ... set goals for workers to reach

24 ... can forget the work while you are not there doing it

25 ... do not have to spend all of your time behind a desk

26 ... do your job in a physically attractive environment

Go on to the next page

Work in which you

27 ... are always increasing your knowledge

28 ... can start and finish your work when you like

29 ... are really liked by your fellow workers

30 ... become quite wealthy

31 ... experiment with different ways of doing things

32 ... are looked up to by other people in society

33 ... are not expected to move wherever the organization wants to put you

34 ... are certain your job will last

35 ... help others live a fuller life

36 ... do not have to think about work once you leave the workplace

37 ... have authority over others

38 ... can work in a pleasant area of the town or countryside

39 ... are not just sitting down all day

40 ... determine the way your own work is done

41 ... enjoy the company of the people you work with

42 ... can acquire specialized skills

43 ... use ideas, materials to develop new ideas, materials

44 ... receive enough pay to live well

45 ... do not have to change where you live to gain promotion

46 ... can obtain a high status in the eyes of others

47 ... make an important contribution to the community

48 ... have a secure future

49 ... set out the best way for others to do a job

50 ... are not expected to take work home

51 ... are physically active

52 ... have a workplace that is clean and tidy

Check your Answer Sheet to make sure you have not left out any answers.

APPENDIX 2

Description of the Subscales of the WAPS and distribution of items

Title	Description	Items
Independence	A concern for being free from imposed constraints in the work environment	1, 16, 28, 40
Co-Workers	A concern for friendship and understanding from those with whom one works	2, 14, 29, 41
Self-Development	A concern for developing and using one's skills and abilities	3, 15, 27, 42
Creativity	A concern for developing something original through one's work	5, 17, 31, 43
Money	A concern for obtaining large financial rewards from one's work	4, 18, 30, 44
Life Style	A concern for the effect that employment may have on where and how one lives	7, 19, 33, 45
Prestige	A concern for recognition and status in the eyes of others	6, 20, 32, 46
Altruism	A concern for assisting others	9, 21, 35, 47
Security	A concern for being able to maintain one's job	8, 22, 34, 48
Management	A concern for organizing the work of others	11, 23, 37, 49
Detachment	A concern for being able to separate work and its influence from other parts of one's life	10, 24, 36, 50
Physical Activity	A concern for being physically active in one's work	13, 25, 39, 51
Surroundings	A concern for the kind of physical environment in which one works	12, 26, 38, 52